



# Sustainable Future

By Patti Armbrister



Passive Solar Greenhouse









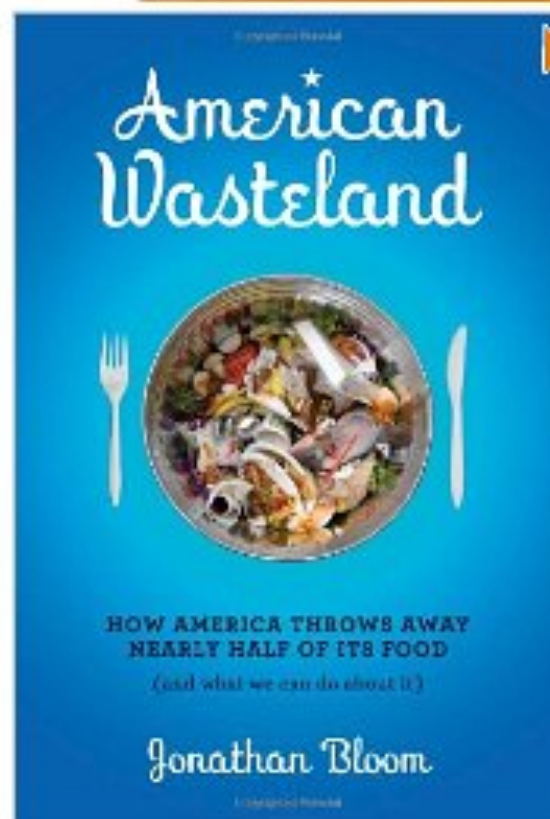








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# Garden-Based Learning



# Sustainable Future

## Patti Armbrister-

|                                   |          |
|-----------------------------------|----------|
| Hinsdale Ag-Ed Teacher (Class 4)- | 5 years  |
| National FFA Chapter Award-       | 3 years  |
| Beef Producer-                    | 40 years |
| 4-H Leader-                       | 30 years |
| 4-H Member-                       | 9 years  |
| Gardener-                         | 40 years |
| Food Processing Experience-       | Life     |

## Degrees:

Agriculture Technical Certificate-

Michigan State University

Ag. Technical Science Associates-

Dawson Community College

Currently working Bachelor in Business non-profits-

Colorado Community College



# Sustainable Future

**Patti Armbrister**

## Grants writing successes:

|                           |      |
|---------------------------|------|
| Montana Farm to School -  | 2008 |
| Qwest Technology-         | 2010 |
| Valley County Foundation- | 2009 |
| FFA Living to Serve-      | 2012 |
| Food for All-             | 2012 |

## Projects-

Passive Solar Greenhouse

No-till School Garden

Outdoor Classroom & Raised Vegetable Beds

# Sustainable

*(Webster Sustainable definition)*

# Sustainable

- Definition
  1. Of, relating to, or being a method of harvesting or using a resource so that the resource is not depleted or permanently damaged (sustainable techniques) (sustainable agriculture)

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## Challenge One

*(Webster Sustainable definition)*

# Sustainable

2. of or relating to a lifestyle involving the use of sustainable methods (sustainable society)

*(Webster Sustainable definition)*

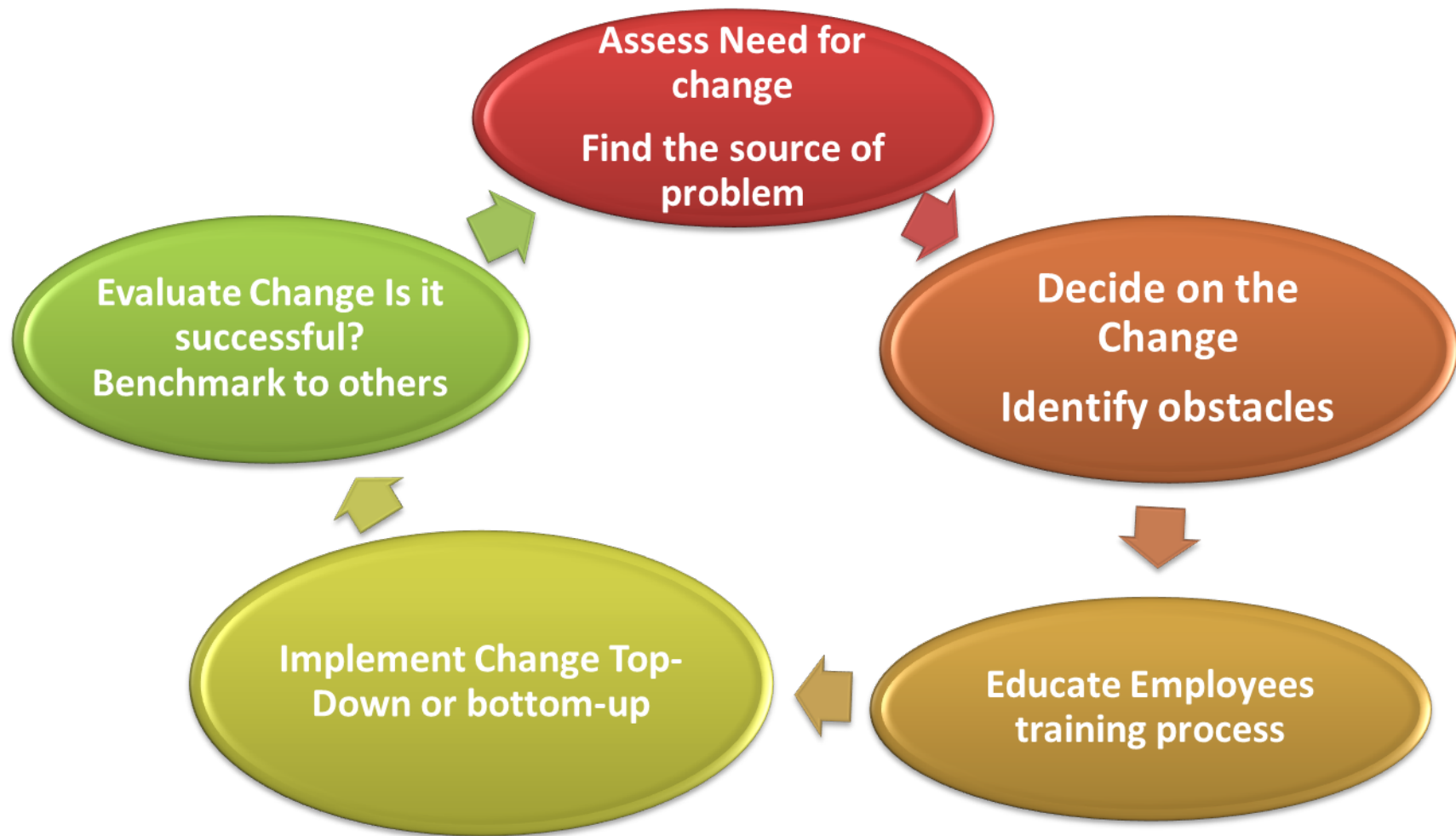
# Challenge

Change in lifestyle involving the use of sustainable methods (sustainable society)

1. (sustainable techniques) (sustainable agriculture)

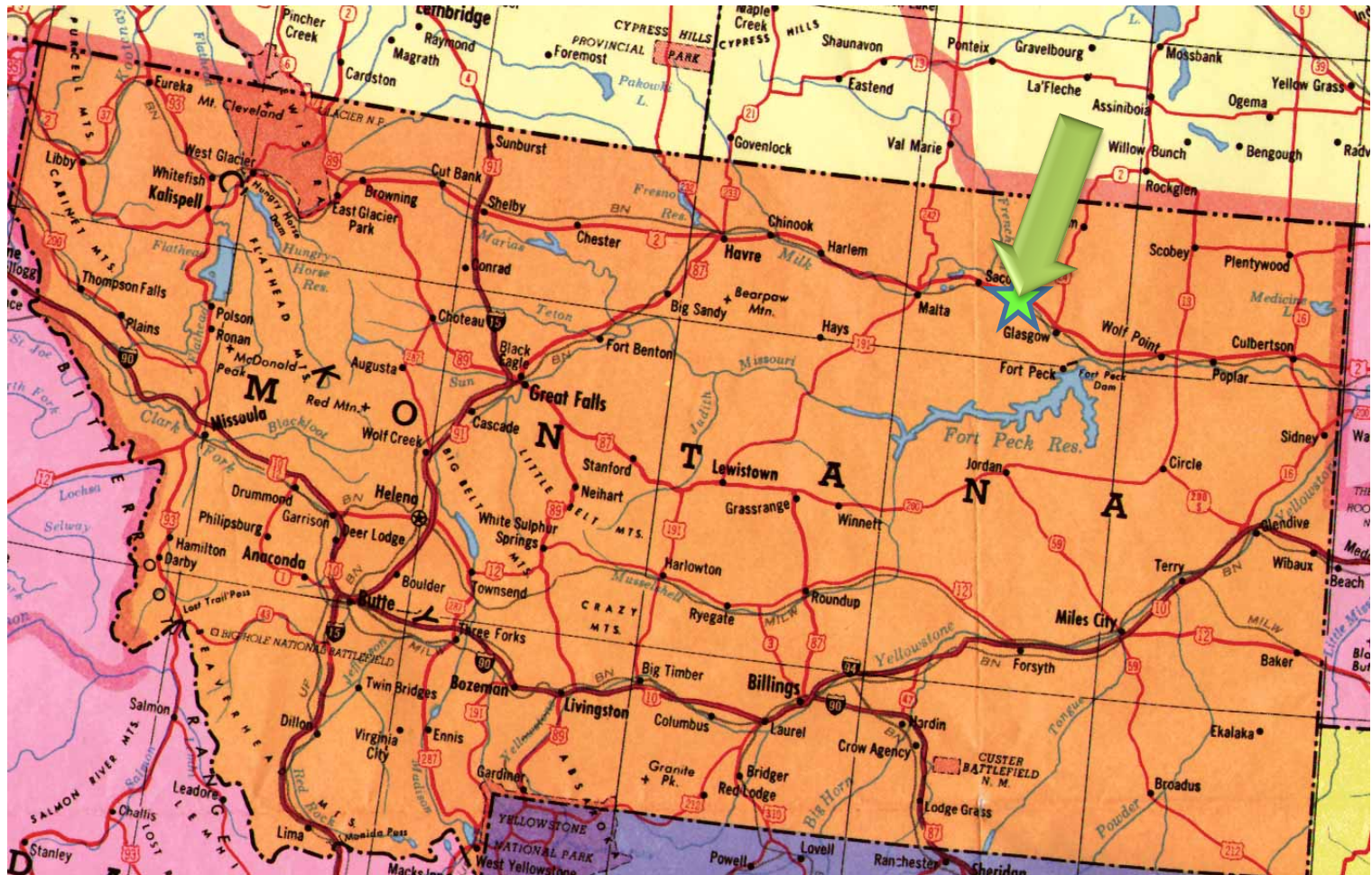
*(Webster Sustainable definition)*

# Steps in the Organizational Change Process



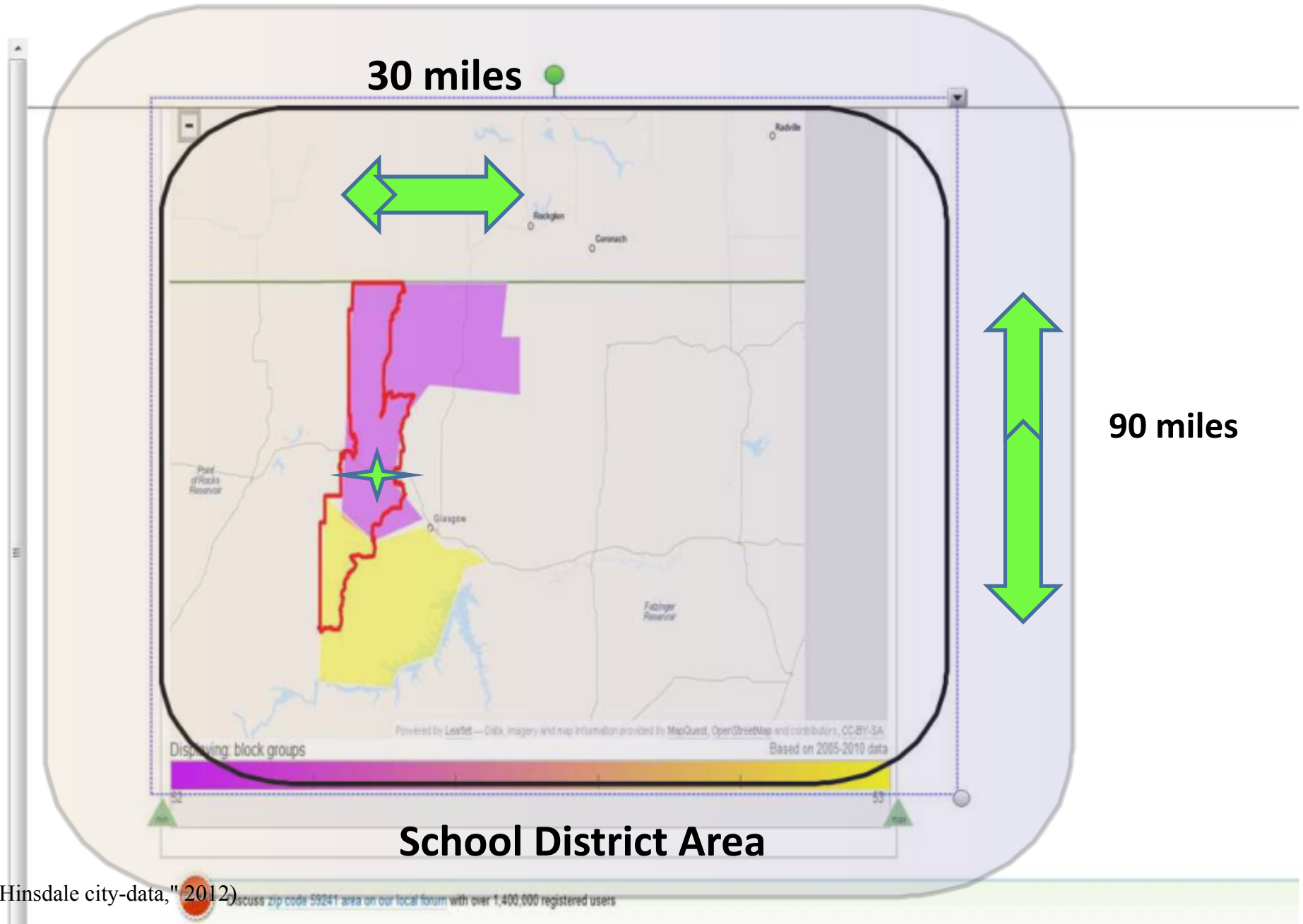
(Armbrister, P.)

# Hinsdale, Montana

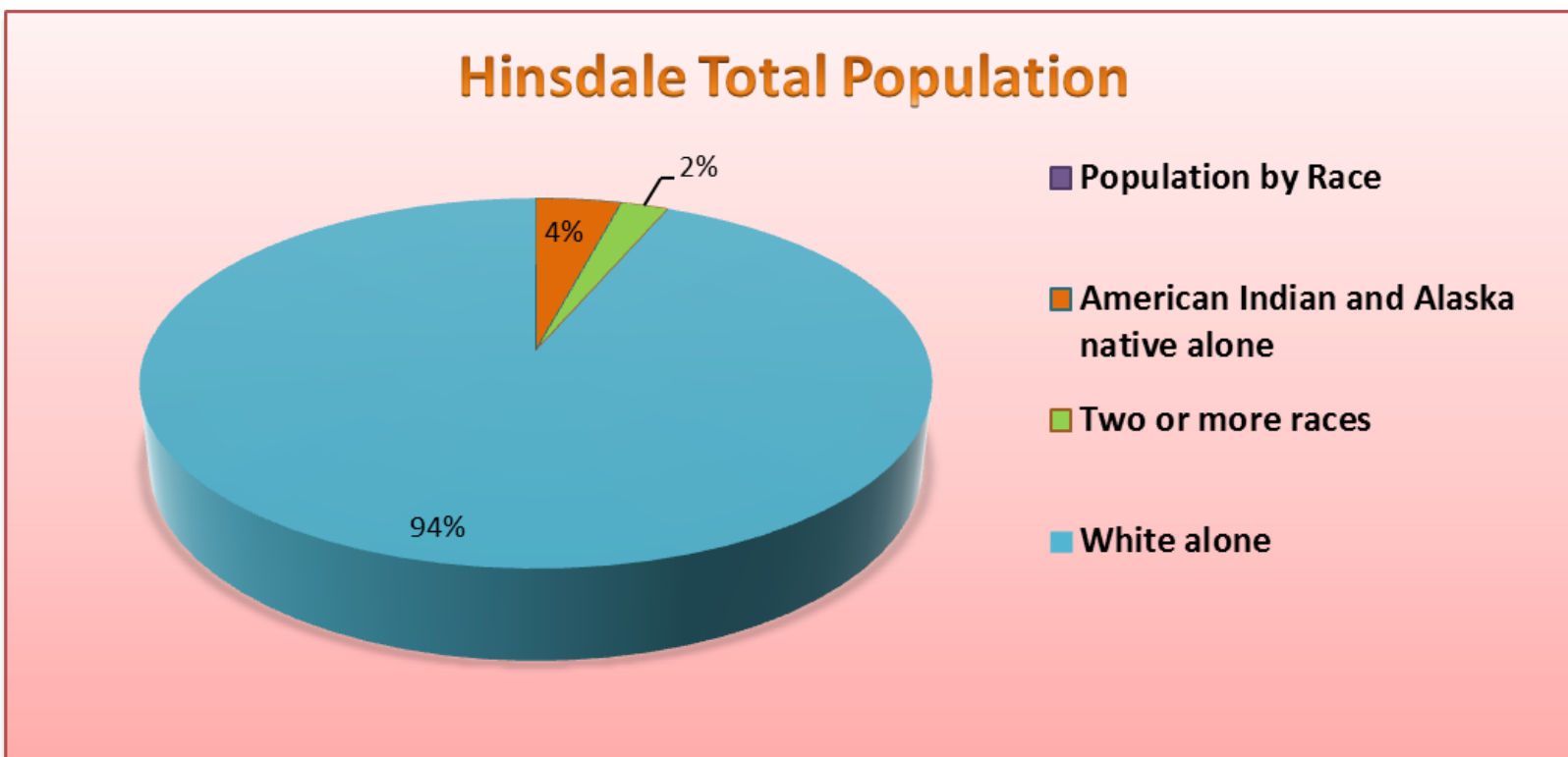


Map of the state of Montana. (2012, August 1).

Located in the between Ft. Peck and Ft. Belknap Indian Reservations



# Demographics'



("Hinsdale Montana 2010 census," 2012)

# Demographics'

- Hinsdale Population

– City residents: 217 – Rural Residents: 229

- Male: 51% Total Residents: **456**
- Female: 49%

## Population by Age Living in the city

|                           |     |        |
|---------------------------|-----|--------|
| Persons under 5 years     | 7   | 3.23%  |
| Persons under 18 years    | 37  | 17.05% |
| Persons 18 to 64 years    | 117 | 53.92% |
| Persons 65 years and over | 56  | 25.81% |

("Hinsdale City 2010 census," 2012)

# Demographics'

- **Size of family households: 84 2-persons, 19 3-persons, 13 4-persons, 3 5-persons, 6 6-persons**
- **Size of nonfamily households: 73 1-person, 4 2-persons**

| Residents with income below the poverty level in 2010: |       |
|--|-------|
| This zip code:   | 9.0%  |
| Whole state:   | 14.9% |

("Hinsdale City 2010 census," 2012)

# Demographics'

**Free Lunches**

**Reduced Lunches**

("Hinsdale City 2010 census," 2012)

# Demographics

## Population by AGE

|                                  |            |               |
|----------------------------------|------------|---------------|
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# Montana School Nutrition Program

## **Vision:**

- **Our vision is school communities that provide children full access to healthful meals and snacks that nourish minds and bodies and school nutrition environments that encourage healthful lifestyles and are supported by community partnerships.**

## **Mission:**

- **To ensure that schools provide nutritious meals and promote healthy lifestyles through collaborative education and training, and administration of the USDA's School Nutrition Programs.**

("Montana school nutrition," 2012)

# Culture

- **Definition**

**1. the integrated pattern of human behavior that includes thought, speech, action, and artifacts and depends upon the human capacity for learning and transmitting knowledge to succeeding generations**

**Challenge**

*(Webster Culture definition)*

**How are we going to change the  
culture?**

**Quote:**

**“You cannot fix today's  
problems with  
yesterday's solutions!”**

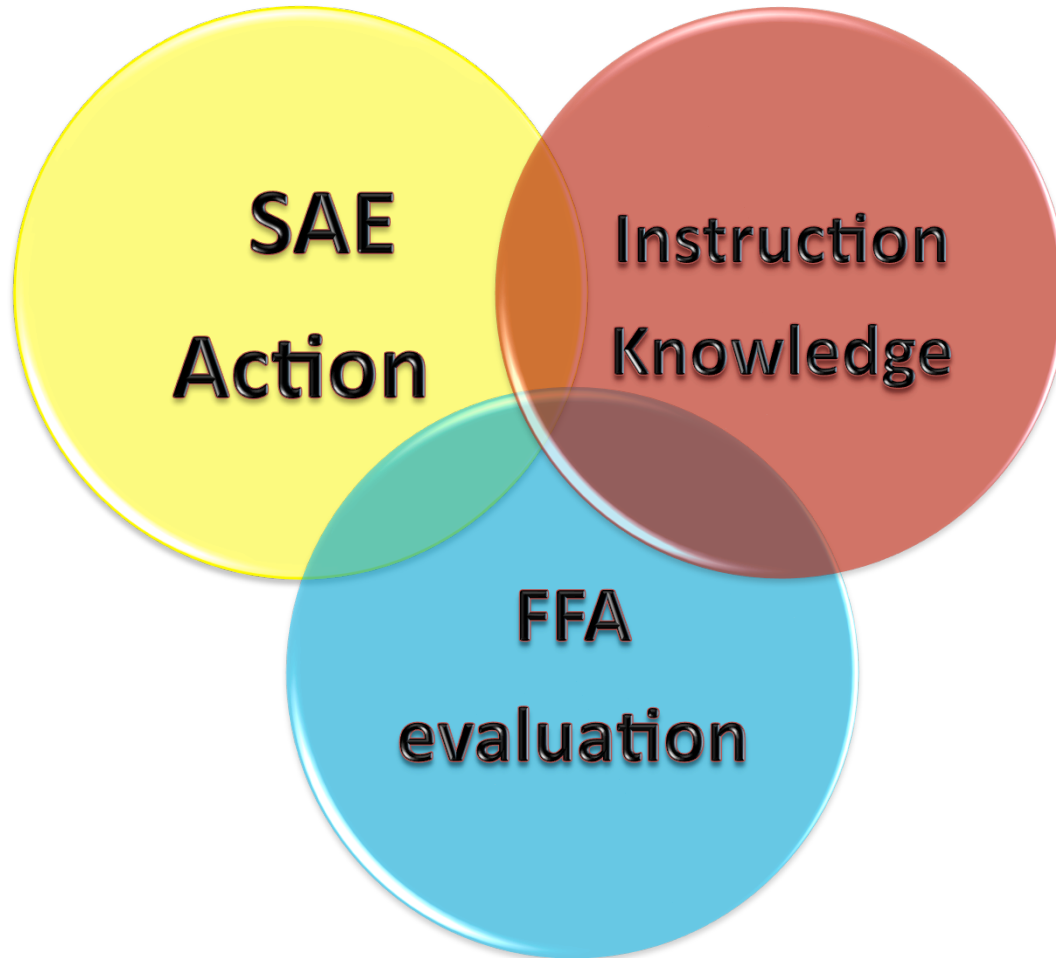
*(Armbrister, P. )*

# Change Process



# **FFA**

## **Supervised Agriculture Experience**



# **Need**

**Sustainability- Local Food**  
**Reduce Hunger- Locally**  
**Reduce Obesity- At Home**  
**Future depends on ability to  
change**



**Action**

## **Solutions**

- **School Gardens**
- **Garden Based –Learning**
- **Produce local foods.**



## History

- What did we have in 1970's?
- 4-H & FFA learning opportunities in every community
  - Learned how to grow food
- School based-Home economic
  - Learned how to cook & handle food
- On site storage-
  - Root Cellars
- Food processing education-home based

# Keys to Success



- What did we have in 1970's?
- 4-H & FFA learning opportunities in every community
  - Learned how to grow food
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# Keys to Success



- Local meat processor's
- Communication's
  - Between the gardeners and the cooks
- Improvement to the rules and regulations
  - Example local meat processor could be used in remote low income areas.
- Transportation Cost

# Keys to Success



- **Community support**
  - School boards
- **School Administrator**
  - The school gardens & buying local food, Has to be their GOAL.
- **School Cooks**
  - Cafeteria Staff
    - STOP food waste
- **On site storage-**
  - Freezer Storage
  - Refrigerator Storage
- **Food Education- School based**

# Keys to Success

- **Community**
- **Key Garden personal**



## 1. **Key Liaison Person**

- A. **Planting**
- B. **Maintains**
- C. **Watering**
- **Ag-Ed teacher**
- **Science teacher, any other teachers**
- **Master Gardeners**
- **Alumni**
  - **School**
  - **FFA**
  - **4-H**

# Keys to Success



- **Determination to be Successful**
- **Our children's future depends on our successes today.**
- **A sense of urgency, has to be implemented, with all key people working together.**

# Sustainable future



- Eat nutritious local food
- Learn how to grow food
- Learn how to process food
- Exercise by gardening
- Stop wasting food
- Composting
- Understanding plant genetics
  - Save seeds
- Improve local food storage
  - Cellars
  - Freezers
  - Refrigerators
- Improve Agriculture techniques
  - No-till gardening, raised beds and urban, vertical, roof top gardens, hoophouses, and greenhouses

# Sustainable future



- **Set SMART Goals**
- **Have the will to complete them.**
- **Never quite, your children's future is dependent on you.**

# Resources



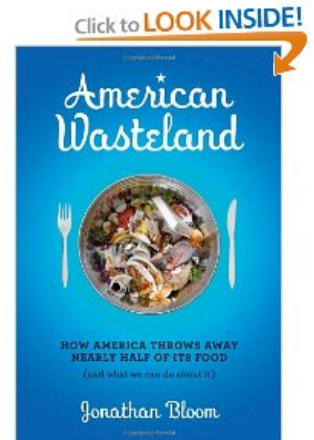
- American Wasteland
- MSU County Extension Services
- Cornell University Garden-Based Learning
- South Carolina High

School s Talking School Gardens

<http://www.lifelabvideos.blogspot.com/>

Garden-Based Learning videos

<http://www.lifelabvideos.blogspot.com/search/label/Scavenger%20Hunt>



(Bloom, J.)

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